WESTERN FARMER & GARDENER.

"THE PROFIT OF THE EARTH IS FOR ALL; THE KING HIMSELF IS SERVED BY THE FIELD."—*Eccles* 5–9.

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WESTERN FARMER & GARDENER.

JOHN D. DEFREES, *Printer and Publisher.*

Indianapolis, January, 1848.

TO OUR SUBSCRIBERS.

This number completes the present volume of the Farmer and Gardener. Heretofore we have announced to its readers that on account of the removal of Mr. Beecher and the limited patronage given to this paper, it would be discontinued with this number unless we could succeed in making arrangements for its continuation. It gives us pleasure to state that such arrangements are made; and hereafter the Farmer and Gardener will be under the control of Mr. C. DAVISSON. Its readers will find in him an intelligent editor; for both his education and agricultural taste fit him for the station he assumes. His acquaintance with Botany and Agricultural Chemistry will enable him to understand the technical terms used by writers on agricultural subjects connected with these sciences, and to so change these terms, in his editorial writings and selections, as to bring their meaning within the comprehension of the general reader, who cannot be supposed to have much knowledge of them. One of our greatest annoyances to our farmers is the use of those words which none but the botanist and chemist understand; We learn from Mr. Davisson that he is now making exertions to have regular correspondents, from the practical agriculturists of our State, that his paper may be the medium through which whatever is useful to our farmers may be communicated to all. Several have promised their contributions, that so desirable an object may be effected.

When it is considered that the Agricultural is the great interest of Indiana, it might be supposed that nothing would be easier than successfully to establish a State Agricultural paper. But experience shows the reverse to be the case; and while political papers are established in nearly every county, and political meetings can be had, at a day's notice, yet in such a State as ours, a State Agricultural publication barely exists, and scarcely a County Agricultural Society is formed. Is this right? Are our farmers doing justice to the importance and usefulness of their occupation, when they manifest this indifference to it? Are the improvements in Agriculture so few, or so unimportant, that no paper is wanted to communicate them to all? Surely not; for no business of life is more rapidly progressing or assuming a nobler station than Agriculture.

Improvement in *farming* will be the chief object; *gardening* a secondary object. Both are highly useful; but the magnitude of the first, especially in our State, as to the number of persons and amount of capital employed, compared with the second, requires that the principal part of our columns should be devoted to it. Still, nothing useful in gardening will be unnoticed.

The terms of the paper will be, as heretofore, *fifty cents* per annum, *payable in advance*. Our experience in requiring advance payments makes it necessary that a strict observance of these terms be enforced. With the American Agriculturist we can say that "subscribers would never make objection to this decision if they had any idea of the loss and trouble of conducting a periodical when any other course is pursued." But in view of the change made in the paper we will forward the first number of the next volume to our old subscribers, expecting every one who does not purpose continuing his patronage, to return it, with his name marked on it. But we hope no one will pursue this course, but that all will remit the subscription price and each one exert himself among his neighbors to procure additional subscribers. Let it not be said that the farmers of Indiana refused support to their State paper; while Ohio, Illinois, Michigan, Missouri and Iowa have their State Agricultural publications. Let a just State pride and due regard to their occupation, urge them to sustain the Farmer and Gardener; and, on our part, we can assure them that no effort will be wanting by Mr. Davisson to render it worthy their patronage.—*Publisher.*

INDEX TO VOLUME THIRD.

Notwithstanding the absence of the editor during the greater portion of the year, no one who looks over the index of the Farmer and Gardener for the year just closed, can say that it does not contain the full worth of the small amount paid for it by the subscriber. There is scarcely a branch of farming—numerous as they are—upon which something has not been said. Many of them have been very fully treated of, as for example the management of Bees and the production of honey—one of the greatest luxuries of our country: there are a dozen different articles on this subject. As many are devoted to the cultivation of Trees, both ornamental and useful, which add so much to our comfort, pleasure and profit. Corn, wheat, and the grasses have been attended to; horses, cattle, and sheep have many pages set apart to them, the addresses to farmers by Gov. Wright, Gen. Tallmadge, and Dr. Darlington, are alone worth the subscription price: the numerous useful receipts, the articles upon soap-making and the dairy, upon fruits and upon flowers, upon puddings, poultry and potatoes, all go to make up a most interesting volume, worthy of binding and preservation. The whole number of articles is about five hundred: and we only regret that owing to unforeseen events, so few of them are from the pens of the editor and subscribers: but if the Indiana farmers and gardeners, to whose in-

terests alone the work is devoted, will do their duty hereafter, their paper will not be without an editor, and its pages will swell with communications from all over the State.

We heartily second the suggestions of our able Iowa friend There is but one paper exclusively devoted to the farming interests of Indiana, yet it has been poorly sustained by the yeomanry whom it is designed to improve,—not half a dozen on an average have taken it in the State, consequently it has not yet paid expenses. A few long-headed farmers in every part of the State have from the first been subscribers to the Indiana Farmer—have made it their constant companion on rainy days and winter nights—and improved by its contents. A few also are subscribers to similar works published in other States. But take the whole State together, there is not one in fifty of the farmers in the State that takes a paper of any kind. We know of no agricultural paper in the Union unworthy of support, yet we think it the duty of "every one to nurse her own child." Therefore, Indianians, aid us in doubling the subscription list of the Farmer for 1848: and you that can afford it, should also take other works upon the subject of farming.

SELECTIONS.

USEFUL HINTS FOR FARMERS---THEIR SONS AND DAUGHTERS, culled from various quarters.

Making Auger Holes with a Gimlet.—"My boy, what are you doing with that gimlet?" said I to a flaxen-haired urchin, who was laboring away with all his might at a piece of board before him, "trying to make an auger hole" was the reply without raising his eyes.

Precisely the business of at least two-thirds of the world—this making auger holes with a gimlet.

Here is young A. who has just escaped from the clerk's desk behind the counter. He sports his moustachios, his imperials, carries a rattan, drinks champaign, talks big, about the profits of banking or shaving notes. He thinks he is really a great man—but everybody around him sees he *is only making auger holes with a gimlet.*

Mr. B. may be put down as a distinguished professor of the gimlet. He was a farmer. His father left him a fine farm, free from incumbrance — but he would'nt be content —speculation in corn and flour arose before him — fortunes were made in a twinkling — so he sold out — bo't largely dreamed of the riches of Astor and of Rothchild, no more work. But at last the bubble burst. The Irish would'nt all stay starved—prices fell, and now Mr. B. has found out *that it is difficult to make auger-holes with a gimlet*

Miss C. is a nice pretty girl, and might be very useful too, for she has intelligence — but she must be *the ton* — goes to plays, lounges on sofas, keeps her bed till noon, imagines that she is a belle, disdains labor, forgets or tries to, that her father was a mechanic, and all for what, why she is trying to work herself up into the belief *that an auger hole can be made with a gimlet.*

Book Farming.—What is it? common book farming is learning by means of books, new facts, opinions, results of experiments, mode of operation, and the using such parts of the information as can be turned to profitable accounts in our individual situations. I wonder if this will be called folly? If so, the more there is of it in the world the better for the farmer. Let us know what others are doing, and then we can soon find out whether there is anything more that we can do to improve our farms, what say you boys? Look at the agricultural papers, and learn what is going on in the world, and don't be afraid and once and awhile to write for the paper yourself?

Ashes, Meadows.—When we increase the crop of grass, in a meadow, by means of gypsum, we remove a greater quantity of potash with the hay, than can under ordinary circumstances be restored. Hence after a lapse of years, the crop of grass diminishes on meadows manured with gypsum, owing to the deficiency of potash. If the meadow is strewed occasionally with house or leached ashes, the grasses will *thrive as luxuriantly as ever.* The potash is by this means restored. *Boys remember this.*

Tilling the Earth—You must be honest.—In tilling the earth, some people go upon the same principle that regulates their business intercourse with men. They must be sure to get *the advantage of the trade;* and if this cannot be secured without, they must cheat and deceive the person with whom they deal. And they think to practice the same artifice upon old mother earth. You will see them on their ground, in the spring as sly as dogs apparently calculating that earth had forgotten the exhausting crops that were taken from her the last year; perhaps they will give a sprinkling of manure, and throw it on so as to make the earth think there is a noble lot of it. Well, they go to work; but the earth won't be cheated. She will reward every man according to his works, *and tell the truth in the autumn.* You cannot get the advantage of her, as you can with human customers. Treat her well and she will reward your expenditures and toil; but attempt to cheat her and *she will make you sorry for it when harvest comes.*

A new England farmer said that one year he made $1500 by minding *his own business,* and $500 by letting the business of *others* alone, in all $2000, a pretty fair sum for one year, for doing right. This act at 6 per centum interest compound, in thirty years as an annuity would produce $158,116. 37-100.

Mr. Penn's Law for promoting industry.

Be it enacted; That all children of 12 years of age and upwards, be taught some useful trade or skill to the end that none ever be idle in the province, but that if they be poor, they may become rich, and if they be rich and become poor, they need not want. This law and fifty-eight others of great importance were framed by the assembly during a session of only *three days.* Wonder if the Legislature of N. York and Ohio in a session of 120 *days* framed any law that will do as much good as this one; what do the farmers say.—[*Ohio Cult.*

Uncle Jonathan.

RUNNING OUT OF VARIETIES---CHANGE OF SEED.

We have often spoken in reference to this subject. Still there is no doubt many entertain the idea that varieties of grain, vegetables, and fruits, have their periods of existence. Another idea, akin to this is, that it is necessary to "change seed"—that a kind of corn, potatoes, or other vegetables, naturally tends to degenerate, when its cultivation is continued on the same farm; and that to insure the best crops, seed must occasionally be procured from a distance. We believe that the reverse of this is true—that the tendency is to naturalize on every spot of earth those species and varieties best adapted to the situation and circumstances. Man, it is true, may counteract this effort of nature by modes of propagation adverse to the principle. The natural course would be to encourage and continue those plants which had best adapted themselves to the location, and which would from generation to generation produce the most perfect seed and the most vigorous stock. Man, instead of this, sows the seed perhaps, of those plants which are least perfect, and which, in consequence, produce a degenerate stock, declining still more with each generation.

It should be the aim of every farmer to procure in the first instance, those kinds of grain or vegetables, which, from their known character, would be most likely to succeed on his land; and then to select seed from those particular plants or stocks which are found in the greatest perfection. Let this course be strictly and constantly followed, and no change made, (unless as a mere experiment on a small scale,) till it is *certain* that a *better* kind can be substituted.

We lately met with some striking facts in reference to this subject, in an article written by Joseph Cooper, of Cooper's Point, New Jersey, and published in the *Memoirs of the Pennsylvania Agricultural Society.* The article was written in 1799, and shortly after its appearance in this country, it was re-published in Europe, where it received much attention. Mr. Cooper was led by his own experience and observation, continued through more than forty years, to repudiate the idea—"that changing seeds, roots, and plants,

to distant places, or different soils or climates, is beneficial to agriculture." He says —

"In or about the year 1746, my father procured the seeds of the long early squash, which have been kept on the farm ever since without changing, and are now *far preferable* to what they were at first. Our early peas were procured from London in the spring before Braddock's defeat, (1756,) and have been planted successively every season since, on the same place. They have not been changed, and are now preferable to what they were when first obtained. The seed of our asparagus was procured from New York in 1752, and since that time I have not planted a seed except what grew on my beds; and by selecting the seed from the largest stalks, I have improved it greatly. A complaint is very general that potatoes of every kind degenerate, at which I am not surprised, when the most proper means to produce that effect are constantly practiced, to wit: using or selling the best, and planting the refuse; by which means almost the whole of those planted are most degenerated. This consideration induced me to try an opposite method. Having often observed that some plants or vines produced potatoes larger, better shaped, and in greater abundance than others, without any apparent reason except the operation of nature, it induced me to save a quantity from such only for planting the ensuing season; and I was highly gratified in finding their production exceed that of others of the same kind planted at the same time, and with every equal advantage. By continuing the practice, I am satisfied I have been fully compensated for all the additional trouble."

Mr. Cooper also states that about the year 1772, he received a few grains of a small kind of Indian corn, said to have come originally from Guinea, and to have the habit of bearing from eight to ten ears on a stalk. The corn was planted, and the ears were of a very small size, small kernel, and but little ripened before frost. He saved some of the largest and earliest, and the next season planted them between rows of a larger and earlier kind. He saved seeds from stalks that produced the greatest number of the largest ears, and were the *first to ripen*, which he planted the ensuing season, and he found the product superior in quantity and quality to any he had ever before raised. He continued to plant that kind of corn, always being careful to select the seed, and it proved so valuable that he never changed it. He gathered the seed in the field, selecting the earliest and best ears—or rather, selecting from stalks containing the greatest number of good ears.

He mentions also a striking example in regard to melons. He received from Georgia some seeds of a kind of water-melon represented to be of superior quality. He says— "knowing that seed from vegetables which had grown in more southern climates required a longer summer than that produced here, I gave them the most favorable situation, and used glasses to bring them forward, yet very few ripened to perfection; but finding them to be as excellent in quality as described, I saved seed from those first ripe, and by continuing that practice four or five years, they became as early melons as I ever had."

A similar instance in regard to the naturalization of melons came within the knowledge of the writer. Several years since, a gentleman near Zanesville, Ohio, brought from the southern part of Virginia some seeds of a choice variety of water-melon. The kind had been cultivated in the neighborhood from which the seeds were taken with great care, and kept entirely free from any intermixture for fifty years. The new location afforded a season hardly long enough for their full maturity, but by taking care to select the earliest, the variety became in a few years adapted to the climate, and our friend became noted for the finest water-melons ever known in the region.—*Albany Cult.*

Thorough Cultivation.—Thorough cultivation is absolutely necessary to the production of good crops. The land should be kept loose, and finely pulverized to a considerable depth, that the roots may easily penetrate the soil in every direction. Under such management the rain will run down, instead of running off, as is the case when the ground becomes dry, hard and baked.

The water that descends in a well managed soil, will in part rise by evaporation and supply the deficiency in time of drought. It is frequently the case that so far from thorough cultivation, the manure is only coarsely mixed with the soil, and it remains undisturbed through the season, the weeds being cut down and the earth barely stirred a little at the surface. The consequence is light crops.

When the soil is very light and dry there is an advantage in stirring it quite deep. By deep plowing among corn on sandy soil, the effects of drought have been avoided in a very dry season.—*Farmers' Monthly Visitor.*

Dress for Farmers.—There is no reason, certainly, why farmers should not study the principles of propriety in dress, as well as those of the *bon ton*. As their labors are necessarily more wearying as well as more wearing and destructive to clothes, than those of the merchant, the lawyer or the doctor, they should remember that this fact is, alone, sufficient to sanction them in "sporting" a cheaper and humbler dress. "Poor Richard" was never more rigid in the inculcation of any maxims, than in that of those which had relation to the cardinal virtues of frugality and economy.

He had always a much higher opinion of the individual who was not ashamed, in his industry, to wear a patched coat—ay, even though it out-rival, in the multiplicity of its complicated hues, the integument of him of yore, than for the mere fop who exposed his back to the adhesive plasters of the law. Wear your own coat, even if it be a poor one; and above all, let its style and quality be adapted to your "calling." This is the true philosophy.—*Maine Far.*

IMPROVEMENTS IN AGRICULTURE.

The following glance at some of the improvements which have been made in agriculture within the last fifty years, is from the pen of Alexander Walsh, Esq. We are sorry that Indiana has not kept up with all her neighbors in these improvements. Her "Agricultural Associations" are few and far between—few "horse rakes" are found in her meadows, and "draining" has been sadly neglected, the most of her ditches being the "dry ditches" of her unfinished canals. We trust a change will come over her before another year.

The Plow. — In this implement the advance in thirty years has been truly astonishing. There is scarcely less difference between the neat cast-iron plow of the present time and the clumsy wooden article used for the purpose at that period, than between that and the iron-pointed crotchet stick used by the ancients. In the case of working and the effect produced on the soil, every man competent to judge will admit that the difference effected by improvement in the last thirty years is equal to fifty per cent.

Threshing Machine. — Experience shows that the farmer who gets out and sells his grain in autumn, admitting that the prices are the same, realizes at least ten per cent. more than he who does not dispose of his crop till the following spring. But it may be safely asserted that in grain-growing districts, the whole force of the farm, if devoted to that object alone, would not be able to bring his grain into market in the fall if threshed by hand. Hence the threshing machine has come to aid, and does the work so much better and quicker than it can be done by hand, that the getting out of a thousand bushels of wheat is counted a small affair.

The Horse Rake. — With this instrument on land fitted as meadows always should be, one man and horse will do the work of six men with hand rakes. The value of this labor-saving machine will not be disputed by those who have tested its power when time presses, or storms lower over the hay field. It is not less valuable as a gleaner in the wheat and barley stubble, where no care can prevent a quantity of grain being left, surprising to one who has never gleaned with the horse rake.

Agricultural Associations.—The splendid agricultural improvements now here and there exhibited, are the results of agricultural journals and agricultural associations, where enterprising individuals meet periodically, and by interchanging their ideas, increase the general stock, in at least the compound ratio to their numbers; each one returns

home with the knowledge possessed by the whole, and with a commensurate stock of new suggestions for future experiments and reflection. The spontaneous operations of the human mind in an unassisted state, require ages to arrive at results which united efforts of numerous individuals, excited by emulation would produce in, perhaps, a few days. Most other employments lead to associations, while the farmer remains in an isolated state, scarcely regarding the operations of his neighbor.

Agricultural associations of this and other States have already effected wonders, and these wonders are now becoming the joint stock of the Agricultural Society of this State, which has been got up by the unremitting and persevering exertions of a few gentlemen, who have thereby conferred lasting benefits upon their countrymen.

INDIAN CORN.—The benefits of skillful cultivation are shown in the improvement of the corn, as much perhaps as in any other way. A crop of seventy-five bushels per aker, is now as common as fifty was a few years ago; and there can be little doubt that 100 bushels per aker are now oftener reached than were 70 at that period.

WEIGHT OF CATTLE.—The records of the Smithfield market in London, prove that within one hundred years, the average weight of the cattle killed for that market has nearly doubled, rising from between four and five hundred to between seven and eight hundred, and the greater part of this increase has been in the last forty years. It is calculated that the cattle offered at the Brighton market, near Boston, average at least fifty per cent. more at the present time than they did twenty years since. This improvement we owe to the knowledge brought to bear on the breeding of cattle, and agriculture generally.

IMPROVED PIGS.—Here is an improvement, which no one, however slightly acquainted with the animal can deny. The dullest eye can distinguish between the round, fat, beautiful Berkshire, and the thin, lean, long-nosed, and long-legged, hound-like creature which seems more fitted for the chase than the sty. The farmer feels the difference in his corn-crib, and still more in his pocket. The difference in the cost of feeding and in the pork made, between the improved varieties and those generally fed twenty-five years since, is not less than forty per cent. This is the result of skillful selection and crosses.

FRUITS.—Compare the quantity and quality of the vegetables now offered in our markets, with those exhibited thirty years ago, and the improvement is astonishing. From the growth of the cucumber to the production of the most delicious of our fruits, the influence of science is felt, and the encouragement for further effort, and the certainty of an ample reward, is everywhere visible.

ROOTS.—Turnep Townsend, as Lord Townsend, the introducer of the turnep culture into England, was sneeringly called, by the fools that vegetated within the precincts of the court, has added by that root alone, it is estimated, not less than sixty millions annually to the value of English agriculture. The introduction of the potato into general use as an article of food, had only equalled the benefit conferred by the establishment of the field culture of the turnep.

DRAINING LANDS.—Thirty years since, occasional attempts were made to open drains, but they were without system or skill; were principally confined to the worst swamps, and frequently failed of producing the desired effect. The light which geology has thrown on the nature of springs, and the effect which chemistry applied to agriculture has shown must be the result of stagnant water or wet soils on the cultivated plants, has demonstrated the best method of draining, and its necessity, and rendered fertile millions of akers that were wholly worthless. Draining is one of the most valuable of modern agricultural improvements.

PRUNING GRAPE VINES.—The present is a favorable season for pruning grape vines, if it has not been done already. It is better to attend to this business in Nov. or early in Dec. If it be omitted till later, and cold weather comes on soon after the operation, and it continues cold most of the winter, when the spring opens the vines will sometimes bleed. But if pruning be done in due time, the cut part of the vine will become seasoned, so as to prevent bleeding in the spring. Sometimes the grape vines may be pruned any time in winter, or very early in spring without their bleeding, but it is better not to depend upon this uncertainty.—*Boston Cult.*

USE OF GUANO.—Ex-Gov. Hill, in a very excellent address delivered before the farmers of Bedford and other associations, gives the following concise description of and rules in regard to the use of guano as a manure.

"I have purchased and procured, for my next year's planting, two tons of African guano. Little of this article has been used in New England—it is dangerous to be used as coming in direct contact with soils. It will kill seed corn wherever it touches; and it is so powerful, in a season of drought, that it will make corn of a luxuriant green in a bed of sand, when laid at a proper distance; it will inevitably burn up and wither the growing stalks if brought into near contact. It is the strongest manure that ever has been used within my knowledge—its ammonia is about one hundred for one of the strongest and richest stable manure. It shows its strength by throwing out additional ears to the corn blades, filling the ears to the point, and sometimes throwing the ear into a double head. It early extends the roots of the growing corn blade far over the ground; I have traced these to the distance of three feet, within four weeks of the time of planting. This guano, like fire and water, is a good servant, but a bad master. If exposed to acid and atmosphere, it will flee away entirely; put to the touch of most kinds of seeds, it will kill them as effectually as the soaking in strong lye. Its best application would be, perhaps, a general admixture with soil or manure, entirely covered over until the ammonia passes into the veins and arteries of the vegetable production which is added by it. Saving ninety parts in the hundred in the price of transport, and easily applied to many acres in the hurried season of putting in crops, guano is destined to become the best of manures. These remarks will apply to a light soil as to the peculiar value of guano—for a single year; its effects on crops of future years, remains to be developed."

PROFITS OF FARMING.

Messrs. Editors,—I have been much interested with various papers that have appeared from time to time in the Cultivator, on the profits of farming; but in my opinion, some of the writers have taken a wrong view of the subject; making the profits of farming to resolve itself into a mere question of dollars and cents; than which, nothing can be more foreign to the object, or less satisfactory to the reflecting mind. But, as example teaches before precept, here are the reflections of a man, an adjoining neighbor, who, two years ago left a lucrative business in Philadelphia, and bought the farm upon which he now resides, for the sole purpose of making *a profit*, and in which he has succeeded beyond his hope, and equal to his most ardent desire.

To the question, whether he did not find the profits of farming few and small, when compared with those of trade' he answered, "Quite to the contrary; I have already realized, far more than the most I had dared to contemplate, and am, at the end of two years, richer than I ever could have become in twenty years of successful trade. It is true, I made more dollars and cents in trade than I now do, but that is *dross*, when compared to the blessings of health of body and peace of mind, which gold and silver can never purchase. Do you remember what a heavy, paunchy fellow I came among you? See me now leap this gate—there; why the attempt would then have burst me up! And the best article I could take to the city for sale, would be my appetite at 12 o'clock dinner; at which, the bacon and cabbage require no topping off, with either *pie* or *pudding*. You remember, when I was as broad as long; I am now as proportionate as yourself; eat, drink and sleep, with an appetite; yawn at bedtime, and never in the morning; am up before the sun, yet the day is never too long: and more than all, *I have no acceptances to take up*. Money! why what use have I for it? I grow my own bread and meat, poultry and eggs, honey, milk, cream and cheese, with vegetables and fruits of every kind, and in the greatest abundance; feathers for my beds, wool for stockings, blankets and common

for my hats: enjoying the luxury of my dog and gun, a carriage and pair for myself and family, with house rent and fuel free! At the same time, by good management, my estate is annually increasing in value; while my property—no longer consigned upon trust to the four winds of Heaven—is secured on the surest foundation; surrounding my dwelling, and under my own eye. Then, what on earth is the use of money? I can't eat or drink it, even if it were cut into mince meat. It is not only the "root of all evil," but the source of disease of body and anxiety of mind, inseparable. So, I for one, am content with the profits of farming; for the fact is, it leaves me scarce any thing to *wish* for, much less to *care* for."

Now this is new reading, which will, I hope be taken for a text, at the approaching meeting at the State House. It need not be added, we, at this distance, look for much useful and interesting information, from a body of men, precisely fitted for "the diffusion of knowledge," of the most valuable kind, amongst us. FARMER.

Bucks Co., Pa. [*Boston Cult.*

The following is the first article from a medical writer, that we have seen, recommending tea and coffee. Who is Robertson? some old granny, who loves good eating and drinking better than health? At any rate it is pleasant to believe in his doctrine these cold days. So we'll stick to these "yarbs."

TEA AND COFFEE.—There are probably few things for which we ought, as regards the means of health, to be more grateful to Providence than for the introduction of tea and coffee. As civilization advances, the man of wealth and rank uses personal exercise less, whether in walking or on horseback, and prefers the luxurious carriage as a means of transporting himself from place to place; keeping pace with progress of civilization, is the number of the thinking and the studious increased, a class of men which is proverbially, and with few exceptions, sedentary; tantamount to the increased number and importance of our commercial relations, is a larger number of men drawn from the fields, and the health-fraught toils of agriculture, into the pent-up and close atmosphere of a town, and have time occupied in sedentary, or almost sedentary, employment; and in these ways there has arisen a daily increasing number, of all classes, who, taking less exercise, could bear less food, could assimilate, consistently with health, a less amount of nutriment; who could not eat with impunity the meat and beer breakfast, the heavy and substantial food to which their fathers had been accustomed; and, as if to meet this, tea and coffee have been introduced, and supply the desideratum: a diet which is palatable, not only moderately nutritious, and if not abused, quite harmless. It has been the fashion of late years for the professors of certain new guises in which quackery has presented itself—arrayed in one case in the assumed garb of facts and experience; in the other, in that of mystical and fanciful reasonings—to contend against the harmlessness of these great beverages of daily use; and to advise their discontinuance, unless in occasional, and probably infinitesimal doses, and for directly medical purposes. The experience, the comfort, the temperance, and well-being of civilized man, are all happily adverse to such a view as this; and, like most of the other errors of these quacks and visionaries, it hardly influences the many, and cannot long continue to influence even the few.—*Robertson on Diet and Regimen.*

WATER FOR STOCK.—This is a subject of great importance. In order that stock of all kinds may be comfortable and thrifty they should have constant access to pure water; and if possible they should be supplied with water in the barn yard, as much manure is wasted, besides animals being likely to accidents, in going at a distance for water. When it is near, animals will drink often, but when at a distance they often go without, and suffer in consequence, and to the disadvantage of the owner, too; for no animal can be profitable without the requisites to the growth, health, and productiveness. Even sheep, that some farmers think can use snow and ice as a substitute for water, will drink frequently when water is near.

When animals have constant access to water, they usually drink a little and drink often, but when not properly supplied they will often injure themselves by drinking to excess.

Some farmers have prepared water works so as to have a constant supply of good water in the barnyard, at the expense of some 25, 50, 75 or 100 dollars, and they would not be deprived of it for the interest, annually, on five times the cost.—*Boston Cult.*

HINTS FOR HORTICULTURISTS AND LUMBERMEN.

Mr. Editor:—I take the following extract from Dr. Liebig's great work on Agricultural Chemistry. It may be found in the chapter headed "The Art of Culture."

"A new and peculiar process of vegetation ensues in all perennial plants, such as shrubs, fruit and forest trees, after the complete maturity of their fruit. The stem of annual plants at this period of their growth becomes woody, and their leaves change in color. The leaves of the trees and shrubs on the contrary, remain in activity until the commencement of the winter. The formation of the layers of wood progresses, the wood becomes harder and more solid; but after August the leaves form no more wood; all the carbonic acid which the plants now absorb is employed for the production of nutritive matter for the following year; instead of woody fibre, starch is formed, and is diffused thro' every part of the plant by the autumnal sap. According to the observations of M. Heyer, the starch thus deposited in the body of the tree, can be recognized in its known form by the aid of a good microscope. The barks of several aspen and pine trees* contain so much of this substance, that it can be extracted from them as from potatoes, by trituration with water. It exists also in the roots and other parts of perennial plants. A very early winter, or sudden change of temperature, prevents the formation of this provision for the following year; the wood, as in the case of the vine stock, does not ripen, and its growth is in the next year very limited. From the starch thus accumulated, sugar and gum are produced in the succeeding spring, while from the gum those constituents of the leaves and young sprouts which contain no nitrogen, are in their turn formed. After potatoes have germinated, the quantity of starch in them is found diminished. The juice of the maple tree ceases to be sweet from the loss of its sugar, when its buds, blossoms and leaves attain their maturity. The branch of a willow which contains a large quantity of granules of starch in every part of its woody substance, puts forth both roots and leaves in pure distilled rain water, but in proportion as it grows, the starch disappears; it being evidently exhausted for the formation of the roots and leaves."

Here we have some very useful facts; indeed, the full extent of their usefulness hardly appears at first sight—it requires reflection in order to get acquainted with it. I shall treat upon it in connection with a variety of operations, each of which is highly important.

First, in connection with transplanting trees and shrubs. When these are transplanted, many of the roots are absent, and the plants deprived to the same extent of the means of external support. If this be done in the summer, when the plant has but little or no starch, and therefore no internal means of support, the plant suffers by the operation, and without great care seldom survives. But if the transplanting takes place in the winter, or at any time after the starch is deposited in its cells, and before the tree or shrub blooms in the spring, the plant does not so much suffer by the operation. It has within itself, by the aid of its starch, the means of subsistence and the first stages of growth, and therefore the roots may more readily be dispensed with. By the aid of its starch it puts out roots and leaves, and by the time the starch is all gone, it may depend upon those roots and leaves for its future subsistence. This is the reason why nurserymen advise the transplanting of trees and shrubs in the fall, winter and spring,—after August and before the plants bud in the spring.

* It is well known that bread is made from the barks of pines in Sweden during famines.

Owing to the carelessness often displayed in transplanting, the earth is not placed close to or in contact with the roots of the plant, and the consequence sometimes is, that when the plant puts forth its small roots, they do not meet with the earth that should surround them, and therefore wither and die. This is one reason why it is better to transplant trees and shrubs in the fall instead of the spring, because during the winter and before the time of budding in the spring, the rains may settle the earth around the roots well, and the efforts of the plant when it puts forth its tender roots, are availing; and if all the other circumstances are equal, the chances for a successful operation of transplanting are good.

We come next to consider our text in connection with grafting. When a graft is well supplied with starch, as it is in a healthy tree, after, say November, and before April, it has the means within itself of growth, provided it has moisture. The graft should be so placed in the stock as to secure this end, if almost absolute certainty is aimed at. Remember the proper time to take grafts from the parent stock is after November and before April, for reasons stated above.

The same remarks with little variation, may apply to slips, cuttings, &c.

So much for the horticulturist merely,—but we now come to show how important our text is to all who use wood —and who does not? It will readily occur to the minds of students, that when wood is filled with this starch, that it offers strong temptations to hungry insects, who are in search of food. They greedily bore into it, eating the starch but unfortunately damaging the wood. This temptation is particularly great, when the starch by the addition of moisture and warmth, assumes the form and sweetness of sugar. It is then extremely liable to be attacked by insects, and if we would avoid them, we must cut such wood as we would use for mechanical purposes, in the summer, after the tree is in full leaf, and before August. This is highly essential; the tree has then but little or no starch in its cells, and when the wood becomes dry, it becomes very hard, and there being no temptation for the insect it does not attack it, and thus a great and often vexatious difficulty is avoided. Wood intended to burn, would be better cut in the winter, for then the starch as well as the wood, may be burned, and wood is easier cut when dry, when it is filled with starch, than when not, for in the latter case it is nearly as hard as iron.

Starch decays more rapidly than woody fibre, as it is more liable to chemical change. Lumber, therefore, that is filled with starch, or that has been cut during the winter, rots much more readily than that cut during the summer.

When clearing land it is desirable that stumps should not throw up shoots. This they are very liable to do when the tree has been cut during the winter, as the stump and roots have been well supplied with starch, and this starch enables the stump to throw up the shoots. If we would get rid of this difficulty, therefore, we will clear our land in the summer.

There is but one other view that may be taken of our text, that presents itself to my view at present, although there may be others that my attention may not now be directed to. That view is this:—when fruit trees bear a very heavy crop late in the fall, they are apt to exhaust their supply of carbonic acid in the formation of fruit, and leave none for the formation of starch, for the use of the leaves and roots of the following year. Hence during the year after such late and heavy bearing, they appear sickly and weak, and although they often blossom finely, they bear little or no fruit. But during the fall of the non-bearing season, they again acquire their supply of starch and gum, and the next year, if other circumstances are equal, they bear their usual fine crop. On this account they are said to bear fruit *naturally* every other year, when if the cause was understood and the tree supplied well with lime, ashes, and ground charcoal, so that it might absorb and assimilate sufficient carbonic acid for its fruit and the formation of its starch—the tree might be made to bear every year—*naturally*.

I have necessarily been brief in all these points, Mr Editor, but an intelligent mind and good judgment cannot fail, when opportunity offers, to make a good use of these hints, —and knowing you have many such minds among your readers, I submit them to you for publication.—*Far. Cab.*

PUT THE TOOLS IN THEIR PROPER PLACES

There are probably very few, if any, men who have had the charge of farms, with men and boys under their direction, who have not frequently experienced vexatious interruptions in their business for want of a tool, which at the moment it was needed, could not be found. It had probably been used by some one of the family, left where it was used and forgotten. Those farmers who require their domestics to deposite the tools which they use, in some definite place, whenever they have done with them, and exact invariable attention to this rule, may be deemed punctilious and rigid, but they often save themselves and others no trifling share of perplexity. A simple instance will illustrate the case. At one time, when I had a large family about me, some vegetables, perhaps turnips, which were buried in the garden, and then covered with a hard, frozen crust, were wanted for dinner; to break this crust a grubbing-hoe was required. It was known there was one about the premises; but nobody could tell where it was. After an extended search, the attempt to find the grubbing-hoe was abandoned as hopeless, and other means of supplying the dinner was adopted. Some time, probably several weeks afterwards, in walking over one of the fields, the hoe was found lying on the ground, and it was discovered that the hired man who had been directed to spread some lime there, had taken it with him to reduce the lime into small fragments; and when he was done with it, had thrown it down and forgotten it.

An old man told me when he was a boy, he was engaged on one occasion, in company with a hired man, chopping wood; and in the evening, they concluded that as they expected to be similarly employed on the next day, they might save themselves the trouble of carrying their axes home with them. They there hid them in the woods and walked home. His grandfather, with whom he lived, saw them returning, but made no observation till they were just retiring to bed; he then inquired whether they had brought the axes home; and upon receiving an answer in the negative, told them they must go and bring them. They asked if they were not to return to their former employment in the morning? but he told them they did not know as they would live till morning, and if they should die during the night, nobody would know where to look for the axes. His orders were therefore peremptory, and they were obliged to repair in the night to the woods and bring the axes home. This taught the boy a lesson which he did not quickly forget; and very probably saved him more trouble in after life, than this nocturnal journey to the woods.

It is said, that Dean Swift was very particular to have the doors shut by those who entered or left the room. A favorite maid, on one occasion, asking permission to attend a marriage at a distance: he not only granted her request, but offered to send a man to wait on her. Pleased with this kindness, she hastily withdrew and forgot to close the door after her. When she and the waiter had been some time gone, a servant was despatched in haste to demand their return. When he overtook them they were several miles on the way, but the order being peremptory, they reluctantly returned home: when the maid presented herself before the Dean and inquired his pleasure, he told her he wished her to shut the door after her. This piece of instruction, we may readily conceive, required no repetition.—*Farmers' Cabinet.*

To prevent wood decaying.—Take twelve ounces of rosin and eight ounces roll brimstone, each coarsely powdered, and three gallons of train oil. Heat them slowly, gradually adding four ounces of beeswax, cut in small bits. Frequently stir the liquor, which as soon as the solid ingredients are dissolved, will be fit for use. What remains unused will become solid on cooling, and may be re-melted on subsequent occasions. When it is fit for use, add as much Spanish brown, or red or yellow ochre, or any color you want, first ground in some of the oil, as will give the shade you want; then lay it on with a brush as hot and thick as you can; some days after the first coat is dried give it a second. It will preserve plank for ages, and prevent the weather from driving through brick work. Common white paint may be used on the top of it, if required for the sake

of appearance. Two coats should always be given and in compound machinery, the separate parts should be varnished before they are put together, after which it will be prudent to give a third coating to the joints or any other part which is peculiarly exposed to the action of moisture, such as water-shoots, flood-gates, the beds of carts, the tops of posts, and all the timber which is near or within the ground. Each coat should dry before the parts are joined, or the last coat applied. The composition should be applied when the wood is perfectly dry. It is necessary to mention that compositions made of hot oil, should, for the sake of security, be heated in metallic vessels, in the open air; for when the oil is brought to the boiling point, or six hundred of Fahrenheit, the vapor catches fire, and though a lower degree of temperature should be used in the process, it is not always possible to regulate the heat, or to prevent the overflowing of the materials; in either of which cases, where the melting is performed in a house, fatal accidents might happen.—*Archives of Useful Knowledge.*

Blind Staggers.—*Mr. Editor.*—About three weeks since, on going to the pen one morning, I noticed that a thrifty pig about three months old, refused to eat. He stood in a stupid, dumpish manner, his head a little drawn on one side, whilst an occasional shiver ran over his frame. Pretty soon he began to turn round, slowly at first, but increasing in quickness, till finally he would sink down in a spasmodic fit.

This desease is known here as the blind staggers. I gave about a gill of castor oil—waited an hour, then took him out and gave another gill. Physicked a little.

The next morning, as he appeared but litttle better, I put into his mouth about half a cupful of salts and sulpher, which I washed down with castor oil. I also cut a hole in the top of his head, and put in fine salt. This at last seemed to *touch his feelings*, for he squeeled outright, and on being let go, soon made his way to a neighboring brook, in which he stood *nosesing* the water for a couple of hours. From this time he began to mend. His fits were at longer intervals—or rather the *beginning* of his fits—for now he only seemed to begin his fit, and leave off without finishing it. In four days from the time he was taken, he had a good appetite and appeared as well as ever. I have had several swine die of this disease, but never before had one recover.

J. D. H.

[*Maine Farmer.*

The young generally find it is as difficult to enter into the feelings of the old, as to read with their spectacles, or walk with their crutches. But they should remember that these wary advisers were once young and romantic like themselves, and that it is from a knowledge of the errors into which such feelings are apt to betray us, that they caution us to be on our guard against their influence. We would not assert that there are no prejudices peculiar to age, or that the young are even in danger of being misled by their seniors and instructors—this would be saying too much. It is sufficient to affirm that the instances in which the old are apt to feel biassed, are precisely those in which the prejudices of the young run strongest in a contrary direction—and that, at all events, there is infinitely more danger to be apprehended from their paying too little, than too much, deference to the opinions of others.

From the Massachusetts Ploughman.

EMPLOYMENT FOR LEISURE HOURS.

Mr. Editor.—Feeling a deep inerest in the advancement and elevation of that class of the community to which I belong, I have ventured to offer a few hints to *young* farmers, especially on the improvement of the leisure hours of winter. This season is too often valued *only* for its opportunities of amusement, and its hours are spent in a manner which merely gratifies the senses, or affords a present entertainment, and the young farmer grows up excusing to himself his deficiency of knowledge by thinking that he had no time which he could appropriate to intellectual culture. To show that *all* farmers have sufficient time to garner up many treasures of mind, I will just make a little calculation.—Tired nature does not now need all of the long night for its restoration, and those to whom the day affords no leisure, will find it quite easy to devote at least three hours out of the twenty-four to the wants and aspirations of mind. If we allow ten pages as the quantity of reading matter, which can carefully be gone over in an hour, we have for the three hours thirty pages; this continued for four months amount to more than three thousand pages—about sixteen volumes of two hundred pages each, or eight volumes of four hundred pages each—an amount which, if judiciously selected, and well digested, would of itself go far towards making a learned man—and all this can be accomplished in one winter. It is greatly to be desired that those farmer's sons who have bidden good-by to their schoolhouse should not commit their books to the dusty shelf, and consider their study days at an end, but feel it their duty to plow deep the mental soil—to root up what weeds may be growing in the moral and social nature, and to elevate themselves to the dignity of true men. Simon.

East Lexington, Dec. 13, 1847.

Young farmers have more leisure in the country than any class of young men. Mechanics labor in the evening, and young men in stores and shops are generally employed till nine o'clock, and have not much more time to read in winter than in summer.

A few hours devoted each day to the acquisition of knowledge will be of great service to any young man, *let* his pursuits be what they may.

More is learned from books by young men in the country than by those who live in the cities. The amusements that are daily advertised in cities draw off young clerks from all serious inquiry, and you find them not so well informed at twenty as farmers are who spend but little time at theatres and public shows.

Farmers and others who find places for their sons in counting houses should be exceedingly cautious and provide that their leisure hours should be properly spent. Half the young men who come here and are not put under strict surveillance during minority contract dissipated habits and become penniless loafers. Let every minor have a guardian to counsel him.—*Editor.*

Order of Agriculture.—We are agreeably surprised to see that the kingly distinctions begin to be conferred upon the tillers of the soil. These honors have too long been conceded to the useless classes—the titled paupers, who *live* at the expense of those who work. In times of old the successful candidates for knightly favors were men of *blood*—bold robbers and cut-throats. In modern days, wealth and high birth have mainly constituted the claims for such distinctions, although in eminent instances, they have been conferred upon men of great attainments in science and the arts, as the reward of literary merit.

But the pursuit of agriculture—the art that lies at the foundation of all others—the substrata on which rest not only all the industrial interests, but the whole structure of governments, with their array of dignitaries and dependents—has not been deemed worthy of heraldic or knightly honors. The toil of the vulgar millions has been so long despised, that false opinions of what is truly honorable in the pursuits of life—a false pride, and a false manhood,—have ruled the world.

That the weak and pernicious notions about the ease and dignity of idleness and uselessness may fully give way, every where, to the common sense which teaches that labor is honorable—we heartily hope. And we have an admiration for the enlightened monarch who has set the illustrious example of instituting an "Order of Agriculture." We see in it the triumphs of intelligent labor—the earnest of what the future will give us—when it shall place Agriculture and the Useful Arts in the foremost rank of civic and natural honors. The King of Prussia has just created an order destined exclusively to agriculture—that is to say, the cultivators and persons who distinguished themselves in the department of industry. The decoration bears on one side the effigy of the King of Prussia—on the other, a motto, "For Agricultural Merit," surrounded with a crown of wheat, with vine and olive leaves. Three classes are to be estab-

lished this order — the King reserves to himself the exclusive right to distribute to the order of the first class; the second and third will be granted to farmers presented by the College of Economy. The distribution will take place annually, on occasions of agricultural festivals and the solemn session of Agricultural Societies in the Prussian Monarchy.—*Prairie Far.*

CHEESE MAKING.

Mr. Editor: — Having just read an article on cheese making in your valuable journal, I take the liberty to make a few remarks upon that subject, having been an experienced practical English dairywoman for twenty years. Since my residence in this country, I have often observed the difference of management in making cheese and butter—likewise in preparing rennet, and have, without egotism, always considered the English mode the plainest, safest, and best.—Shall I intrude by making a few observations?

The rennet I used was prepared by myself. Having washed most thoroughly the stomach of the calf in nine or ten pails of spring water, I used to fill it with salt and lay it in a jar with a thick layer of salt at the bottom, covering it also with a thick layer, and closing the jar at the top with brown paper doubled, until the next spring, at which time I filled the jar with strong brine, and in a day or two made use of the rennet, which was sweet and good, besides being very strong. As we kept a large dairy I had generally three or four rennets in one jar. A very small quantity of this strong rennet would answer the purpose, viz: one tea cupful for four pails of milk; the milk to be heated blood-warm and the rennet applied briskly and in a circular manner around the cheese-tub; the coloring, formed of annatto, rubbed upon a piece of broken ware in a bowl of warm milk, and completely mixed with the rennet in the tub; within 20 minutes the curd will be fit to break, which must be done with both hands in a complete manner, and then left to settle. In three quarters of an hour the whey may be poured gently away through a range into another tub, and then pressed well with the hands, and even cut with a knife, and removed from side to side to extract every drop of the whey as much as possible. Then leave it a quarter of an hour to settle into firm curd; after which it may be broken very small into the vat, piled up in a conical form with the cheese cloth tightly closed in at the sides. It will now be time to place it in the press, (a heavy one,) and in an hour's time take it out, turn it, and having well rinsed out the cheese-cloth in cold water, the cheese may be replaced. At four o'clock in the afternoon it must be taken out again, and a dry cheese-cloth exchanged for the wet one; replace it in the press, and the next morning having taken off the cheese-cloth, salt the vat at the bottom and rub a little into the cheese at the top and sides, (*if well closed,*) replacing it without *any* cloth; turn again and salt the same at 4 o'clock P. M., also the next day, and if a thick cheese, *the day after.* It is convenient to have two presses; and the brine which runs from what I call the dry press, will be useful to keep fresh for rennet in the autumn. Thick cheese should always remain *three days in the dry press,* salted twice a day. There would not be any occasion of binding fillets around them if this was attended to, besides making the rind very hard.

When taken out of the press the cheese should be turned every day upon the shelf and washed in whey, in a fortnight or three week's time.

The English plan is to soak the cheese about ten minutes, and then scrape the rind upon the table, wiping it very dry, and replacing it on the shelf with a dock leaf or two spread upon the top; and if changed every other day it will soon be coated with a beautiful bloom, and there would be no occasion of rubbing butter on the outside; for if *well made,* cheese will not crack open—will bear transportation to England *well;* and keep for two years. Butter also would be much better transported in small barrels, with first a layer of butter, then of salt alternately. The brine will keep it good, if, when placed and pressed down in the barrel, it had been properly made and the buttermilk well washed out.

Dairy work requires a great deal of care, cleanliness and time, without which it does not answer, and the trouble and fatigue are completely lost—and the dairy, which would by vigilant attention prove such a constant source of pleasure to the farmer's wife, becomes a source of remorse, disappointment, and continual mortification. Dairies in England are always paved with stone or brick, and in warm weather *kept constantly wet,* so that they are equal (when underground, as our own Wiltshire dairy-house was built,) to the spring-houses in Ohio and Pennsylvania; the milk likewise being kept in large leaden coolers, preserved the cream, and rendered it very thick and good.

With a thousand apologies for occupying so much space in your highly interesting journal,

I remain, sir, with great respect,

Your much obliged friend, S. L.

Ogden, N. Y., July, 1847.

The writer of the above is entitled to our thanks for her valuable communication.—*New Genesee Farmer.*

CEMENT FOR FLOORS. — It is often desirable to have a cement floor, rat-proof. The following receipt was procured by J. S. Skinner, from Col. Totten, of the U. S. Engineer Department:

The mortar is to be made of one part of sand to one-half part of hydraulic cement, measured in rather stiff paste. Then one part mortar, thoroughly mixed, is to be used with two and a half parts broken stone or bricks, the largest pieces not exceeding four ounces in weight, or of gravel of similar sizes, or of oyster-shells, or either or all of these mixed together. These coarse materials must be free from sand or dirt. The concrete thus made, must be put down in a layer of not more than six inches, which will be about the proper thickness for the floor; rammed very hard, and until the coarse particles are driven out of sight, care being taken to bring the top of the mass into the true place of the floor by the first process; no subsequent addition of plaster being admissible. By the help of a straight-edge drawn over guide pieces, the top surface may be made smooth and even by the first operation.

The concrete should contain no more water than is necessary to give the requisite plasticity to the mass. The floor should be covered as soon as finished, with straw or hay, which should be kept wet for several days, the longer the better.

WINTER'S WORK FOR FARMERS.

Wood for the whole year should of course be cut and hauled, and all the timber that is to be used on the farm, or to be sold, can be hauled to greater advantage on a snow path than on wheels. The cutting and splitting at the door is proper winter work, and all this should be done while the snow is on and while the plow must be at rest.

Fences are to be made, or repaired annually; and all the wood material may be cut, split, morticed, &c., ready to be set as soon as the frost is out of the ground. The broken tools, too, may all be repaired in the shop, or in the kitchen corner out of the way of the cook. Hoe handles, rake teeth, axe handles, and various other small matters may be attended to in winter rather than at the time when the tools are wanted for use.

In the winter season yokes may be made; and any farmer who has a good axe and a shave and auger may as well make his own yokes as to hire them made. Steers' yokes particularly are very soon made, for there needs not much carving in small yokes, and very crooked ones are not suitable for steers.

Steers and colts can be broken and made handy in the winter better than the other seasons. Leisure is needed to train them well. Colts should be halter-broken when they are quite young. This is done by putting a halter on and letting them know there is something stronger than they are. They should then be trained to go by the side of the mother when she is in harness. They may be tied to the shaft of the wagon or the chaise and go to mill or to meetings. Colts trained in this way will never be afraid of the wagon or the chaise behind them; even though the bridle breaks and the blinders come off.

So far colts may be broken when they are but a few weeks old. The only objection to handling them when so young, is, that boys will attempt to ride them and put them

into harness where they may learn vicious tricks. Boys cannot break them properly. Great care and patience, and judgment should be exercised in training them at first to draw and to carry burthens on their backs. The winter season therefore is the time when young animals should be trained.

But the boys must be kept at school through the winter months. Let not farmers' boys be led to think they are not educated as well as boys who go into stores and other places of business. Let the boys be scholars through the winter months, and let people who have families be employed during the same time to do the hardest jobs that are to be done in winter.

Other work may be done in winter if farmers choose to have other business than farming on their hands. In many counties in Massachusetts the shoe business is carried on to a great extent by farmers in the winter season. The trade of making coarse shoes, or brogans is soon learned; and young farmers will be in better tune for spring work after making shoes through the winter than after a winter of idleness and dissipation.

A day lost is more than the loss of a day's wages—for the expenses of the lost day are to be reckoned and added to the first loss. Yet young men are advised not to confine themselves in winter to labor so closely as to have no spare time for reading. No man need to work so many hours that he cannot devote one or two to reading in each winter evening.

Maine Cult.

NEW VARIETIES OF INDIAN CORN.

In the Cultivator for 1845, page 28, is a communication from the late Judge Darling, of Connecticut, in relation to a new variety of corn that he had produced, by mixing sweet corn with a very early variety. A sample of the new variety was forwarded to us, which was distributed to different persons in this vicinity, by whom it has been since raised. It proves to be a highly valuable kind on account of its earliness—ripening nearly a fortnight earlier than common sweet corn, and at the same time with the earliest Canada corn known among us.

Another instance of producing new varieties of corn by intermixture, has lately been made known to us. Mr. Jno. Kossing, of this city, being on a visit to Kentucky in 1844, brought from Mr. Clay's farm at Ashland a few ears of corn. It was rather a gourdseed variety, similar to what is frequently met with in the region where it grew, having from 24 to 26 rows to an ear, the stalks growing from 12 to 14 feet high, and requiring more time to ripen than our seasons generally allow. Mr. K., however, planted it as early as practicable in the season of 1845, and afterwards planted alongside of it some common eight-rowed sweet corn; planting the latter so late that it would come into blossom at the same time with the corn from Kentucky. When the corn ripened, he found the sweet corn more or less mixed, as had been expected, with the other. He picked out the sweet grains, which are easily told by their shrivelled appearance, and in the spring of 1846 planted them, at a distance from other kinds. The produce of that season more plainly indicated the mixture—the ears were generally larger than the former sweet corn, with an increased number of rows—some ears showed a preponderance of one variety, and some of the other. In 1847 he again planted by themselves the sweet grains from the largest and handsomest ears that were best mixed with grains of another kind. The result is that he has this year produced a kind of sweet corn having considerably larger ears than any sweet corn we have ever seen before; but having the general habit of growth as to size and height of stalk, and ripening at the same time that the old kind of sweet corn did.

The first year of these experiments, there was also a few grains of corn planted which were the result of a mixture of sweet corn and the large white Tuscarora corn. This was allowed to mix with the Kentucky corn in the same way that the other kind did. The produce of this is, therefore, a mixture of three kinds — the Kentucky, the Tuscarora, and the sweet. The same course in regard to planting by itself, was pursued with this as with the other kind, for 1846 and '47, and the produce the past season is quite uniform and distinct. The grains have the size of the largest Tuscarora corn, with the shrivelled character of the sweet, and a flecked or reddish tinge denoting the Kentucky cross.

Samples of the above kinds of corn may be seen at our office.—*Alb. Cult.*

ON THE USE OF WATER IN TRANSPLANTING TREES.—This is a practice which is condemned by many gardening writers; but is their objection founded on careful experiment; or has the subject, like so many others, been prejudged? Experience and reflection have given me a high opinion of the use of water in transplanting trees, and I will give you a brief description of my method, which you may take for what it is worth.

After preparing the border for the tree, I take out sufficient earth to give the roots room to lie in their natural position. This earth is finely pulverized. One man now holds the tree in a perpendicular position, with its roots in the hole, while another pours two pailsful of water into the hole, and a third slowly sifts the fine soil into the water, being at the same time careful to fill the outsides of the hole so as to keep the water about the tree.

This process leaves the roots exactly in the position which they occupied before removal, and it makes the earth settle about them in the most perfect manner. If the soil is fine, and if it is sifted into the water slowly, it is deposited on every side, and every part of the roots, filling all of the holes and interstices, coming in contact with the smallest fibre, and covering the surface with perfect uniformity, like the deposits of gold in galvanic gilding.

Trees set in this manner, maintain their upright position much better than trees set by the ordinary method. If you take hold of a tree immediately after it is set, in the way I have described, you can pull it over very easily, but after it has stood a few hours, it feels as if it had grown in its new position.

Finally, I am confident, from practice, that the trees are more certain to live and grow vigorously when water is used in this way, while they are being planted. After losing a great number of trees, I adopted this plan of transplanting, and have since set about five hundred, out of which I have lost about a dozen, and I think most of these were dead when they were removed.

GEO. BARTLETT.

Horticulturist.

SAVING AND APPLICATION OF MANURE.

MR. EDITOR: In the last number of the Farmer I observed an article under the head of "How should manure be applied to land," which is pronounced a new theory. Perhaps Mr. Underhill's theory may be new with many, at least scientifically; but it is by no means an untried theory in this Western New York among practical farmers. The old theory that manures lose their properties by leaching and running deep into the earth, especially in our good wheat soils, has always looked to me to be incorrect, and one which my experience has fully proved to be so. In all of our good wheat lands the subsoil contains so large a portion of clay that water is very slow to penetrate it, while the gasses and salts imparted by fermentation of manures are always rising to the surface. There is perhaps no branch of farming which is more injudiciously managed than the saving and application of manures, and certainly there is no one thing so vastly important to the farmer's prosperity as that of manuring and keeping the soil rich.

Every farmer has, or at least should have, a theory or system which he follows in all his operations in business; and being myself desirous always of hearing and learning the views and practices of others who follow the same calling as myself, I take the liberty of giving to you my theory and experience in the use of farm manure. In the first place my theory is, that yard manure should be covered deep in the soil that the gases which arise from it while fermenting and decomposing may be incorporated in the soil, and taken up by the roots of plants. In the next place, that coarse manures lose half their value by lying in the heap till thoroughly decomposed; and next, that the soil is capable of producing a crop annually, without diminution, provided we restore to it the like properties which the crop requires in its production. We are all aware that the straw

of wheat in this wheat section forms the principal heap in the farm yard. I have annually in my yard the straw of about fifteen hundred bushels of wheat, which I put in a snug stack at the time of threshing. In winter I allow my cattle, hogs, &c., to run to the stack at pleasure. In December I commence demolishing the stack by cutting off a slice and scattering around the yard—following it up about twice a week, in proportions to get it all under foot about the middle of March. In this way my stock have always a dry yard, and need no other protection than open sheds to shelter them from storms.

My corn stalks are cut fine in a machine by horse power, and fed in troughs, sparingly, through the winter—which, together with the straw stack, keeps my stock in good condition through the winter till warm weather begins, when a little hay carries them through in fine condition. My manure heap, you will perceive, is then well wet down by rains and snows which fall at intervals, while the straw is being spread over the yard, and, interspersed with the excrements of the cattle, is ready about the last week in April or first of May to cart to the field designed for it, which I do at the rate of about thirty or forty cart loads (according to the condition of the land) to the acre. I then commence spreading and plowing, turning the manure under about ten inches deep, taking care not to have it spread faster than just to accommodate the plow, to avoid drying up by the sun and wind. It is sometimes necessary to have a man follow the plow with a rake to draw the manure into the furrow to prevent clogging the plow. When this is done, and rightly done, I roll down the furrows, harrow well and plant to corn—planting an early kind that it may be ready to harvest by the middle of September; which latter is done by cutting up at the ground and drawing off. The ground is then plowed and sown to wheat about the 20th of the month. This I count as good as a naked fallow, and frequently turns out better, while the corn crop is much benefitted and no value of the manure for the wheat crop lost.

R.

Genessee Farmer.

FACTS IN THE HISTORY OF ENGLISH AGRICULTURE

In the reign of Edward I. so low was the state of agricultural industry in England, that a writer of that time entered into a grave calculation "that if land yielded only three times the seed sown, the farmer would be a loser, unless corn should sell dear." The usual quantity of seed was two bushels to the acre. There is an account of a farm in the county of Norfolk, which in the year 1390 produced only six bushels of wheat, twelve bushels of barley and five bushels of oats per acre. Gardens were not introduced into England till the early part of the fifteenth century. They first made their appearance on the eastern shore of the kingdom, from the neighboring country of Flanders, but for a long time were not sufficient to supply the wants of the few wealthy persons who possessed them.

The common cabbage was first introduced from the Netherlands in the year 1539. Its cultivation at first made little progress. In 1562, an old English writer said, "The cabbage is good to make pottage withall, and is a profitable herbe in a commonwealth, which the Flemmings sell deere, but we have it growing in our owne gardens, if we would prefer our owne community; for there be great plenty growing between Aldbrought and Hotham in Suffolke, upon the seashore."

An agricultural writer of the time of Oliver Cromwell, says that the old men in his days remembered the first gardeners that establi-hed themselves in Surry, in England, and sold carrots, parsnips and early peas of their own production, which before that time were deemed great rarities and were almost exclusively imported from Holland.

Cherries and hops were not cultivated in England till the reign of Henry VIII. Artichokes and currants made their appearance later, in the time of Queen Elizabeth. Even at that time, onions were imported from Spain, none being produced in the British islands.

Potatoes were first known in England about the year 1586. For nearly a century, they were cultivated only in gardens as a curious exotic furnishing an expensive luxury, for the tables of none but the richest people in the kingdom. The plant, which has now become the principal means of saving the lowest and poorest classes in Great Britain from starvation, by supplying them with a cheap and abundant article of food, was at one time so rare, that, as it appears from an account of the household expenses of Ann, wife of James I. the price of potatoes was rated at one shilling per pound!

In those early times there scarcely existed any middle classes or any cash market for produce. The land belonged to a few great proprietors, for whose benefit it was cultivated by their dependants. The surplus of years of abundance often sunk to a price nearly nominal, wheat being in many instances sold as low as six pence per bushel. Under such circumstances, the results of a plentiful harvest were wasted in feudal profusion, and when, on the other hand, a short harvest occurred, wheat rose to five or ten times its ordinary value, a general famine prevailed, and the poor were compelled to subsist upon roots and other miserable fare.

It is commerce which, by supplying an outlet for the surplus and a prompt remedy for the deficiencies of all civilized countries, has protected all countries against the ruinous consequences of these sudden changes, and given, comparatively speaking, a certain and unchanging value to the productions of all countries. Agricultural industry, now secure of its reward, no longer squanders its earnings in the lavish carousals which distinguished the middle ages, and short crops are no longer dreaded as forerunners of famine and starvation among the poorer classes of the people.—*Coos (N. H.) Democrat.*

PATRONAGE.

"Let every mother nurse her own child" is a wise saying of somebody. We apply the admonition it contains to western papers. We believe each of the western States has now its own agricultural paper. The Ohio Cultivator for Ohio; The Farmer and Gardener for Indiana; the Prairie Farmer for Illinois; the Missouri Farmer for Missouri, and the Iowa Farmer's Advocate for Iowa. Now let each of those States give full-handed support to its own offspring first, and then extend, so far as individual circumstances will permit, patronage to other and more distant agricultural papers. It is a principle with us that every family should take two or more agricultural papers;—first, the one published at home, in its own State, and then such other, or others, as may be most congenial to each man's peculiar taste.

Again, we contend that *one* agricultural paper well supported is enough for each State, except those which are published in our large eastern cities, and especially intended for general circulation, throughout the entire length and breadth of our vast republic. Of such papers there are now plenty, admirably adapted to the extensive country over which they circulate and it is only to be regretted that many of them devote so great a portion of their columns to mere local matters which are of little or no interest beyond the immediate vicinity of their publication.—*Iowa Farmer.*

LIME AS MANURE.—Lime appears to have succeeded much better as manure in some regions of the country than in others. The eminent success which has attended its use in many places, should induce a trial, at least, throughout the country.

Two communications have appeared in the *Ohio Cultivator*, describing its very successful application, of which the following is the substance: The first experiment was eight or nine years ago, with three akers of old, worn-out field, the soil clayey, with some loose sand stones. It was applied at the rate of 100 bushels per aker, after the land was plowed, and before it was harrowed, for corn. The corn on the limed ground was nearly twice as heavy as on the rest. The same was true of the oats that followed the corn; and of the wheat after the oats; and of the clover after the wheat, where the heavy growth indicated to a foot where the lime terminated. A subsequent communication from the same writer states, that lime had been applied both with and without manure. "When we put on the lime, we always put on all the manure we make, either in the spring or in the fall—which is from 75 to 100 cart-loads. Lime itself will make the ground produce about 50 per cent.

—lime and manure, 100 per cent.—when we put on 100 bushels of lime per aker, which we always aim to do."

SORREL.—The same correspondent states that a sandy field, or a hill of chestnut, poplar, and hickory timber, soon after it was cleared, failed to produce much grass, or anything else than "horse sorrel." A hundred bushels of lime per aker were applied before sowing wheat, and clover sowed on the wheat towards spring. "The sorrel left about the time it saw the young clover, and has not been seen since."

Farmers who have applied lime with partial or little apparent benefit, often estimate its use erroneously, by not taking into account the long endurance of its enriching powers, which is many times that of common barn manure.

THE INDIANA FARMER AND GARDENER.—By an article in the last Prairie Farmer, we learn that this able advocate of the cause of husbandry and horticulture in Indiana, is likely to be discontinued, and for two reasons,—the want of sufficient patronage and of a competent editor.

It will certainly be a lasting disgrace to the citizens of Indiana to suffer it to die for want of support. To say that the farmers and industrial population of that State cannot sustain their agricultural paper, will be to acknowledge that they are incapable of appreciating the benefits such a paper would confer on them, as well as to acknowledge themselves destitute of that intelligence which prevails in neighboring States; for the greater the intelligence pervading a community, the greater the desire to add to it still further.

But that the Farmer and Gardener should be discontinued for want of a competent editor, may not at first seem to be so justly chargeable upon the citizens of Indiana. A failure from this cause, however, need not be apprehended. Give the Farmer and Gardener good patronage, and there will be no lack of competent editors; but so long as its list of patrons is meagre and unsatisfactory, there will few be found, who, competent to the task, will devote their time and talents to the interests of a community which manifests no desire to return a fair equivalent for the labor and mental toil requisite to conduct an agricultural paper.

Iowa Farmer.

DRAINING.

H. Colman, speaking of the evils of *stagnant* water in the soil beneath the surface, says: "Plants produced on a very wet soil are unpalatable, innutritious and unsubstantial. Animals fed upon them always lose condition, and the manure of animals so fed is almost worthless. I saw this strikingly illustrated in the magnificent park of the Duke of Bedford, at Woburn Abbey. Here there were many spots where the grass was luxuriant and abundant, on account of their excessive dampness, and which were entirely neglected both by the sheep and the deer; but wherever these places, once wet, had been thoroughly drained, they became the favorite resorts of these animals, and were fed as closely as possible."

A PANTALOON STORY.—The "Yankee Blade," which is responsible for some of the "severest" stories afloat, gave its readers the following clincher last week. There's no use of trying again:

Our Uncle Ezra is in the habit sometimes of "stretching the truth" a little—a vicious sort of a propensity from which the rest of the family are singularly free. We heard him tell Snooks a rather severe tale one day last week, which we have concluded to give to the world. "When I lived in Maine," said he, "I helped *break up* a new piece of ground; we got the wood off in the winter, and *arly* in the spring we begun to think of plowin' on't. It was so consarned rocky that we had to get forty yoke of oxen to one plow—we did, faith,—and I held that plow for more than a week—I thought I should die. It e'en a'most killed me, I van. Why one day I was holdin', and the plow hit a stump, which measured just nine *foot* and a half through it—hard sound white oak. The plow split it, and I was going straight through the stump, when I happened to think it might snap together again, so I just threw my feet out, and I had no sooner done this, than it snaped together, taking a smart hold of the seat of my pantaloons. Of course I was tight, but I held on to the plow handles, and though the teamsters did all they could, that team of forty oxen could'nt tear my pantaloons—nor cause me to let go my grip. At last though, after letting the cattle breathe, they gave another strong pull altogether, and the old stump came out about the quickest; it had monstrous long roots, too, let me tell you. My wife made the cloth for them pantaloons, and I hav'nt worn any other kind since."

The only reply Snooks make to this was, "I should have thought it would have come hard on your suspenders."

The Dutch cheese, or smear case that we have seen was generally soft and easily eaten; but we have seen cheese in Indiana that would rival that spoken of in the following anecdote:

CHEESE VERSUS CANNON SHOT.—The greatest ammunition that we have heard of lately, was used by the celebrated Commodore Coe, of the Montevedian navy, who, in an engagement with Admiral Brown, of the Buenos Ayrean service, fired every shot from his lockers.

"What shall we do, sir?" asked his first lieutenant; "we've not a single shot aboard—round, grape, canister, and double-headed, are all gone."

"Powder gone, eh?" asked Coe.

"No, sir—got lots of that yet."

"We had a confounded hard cheese—a round Dutch one, for desert at dinner to-day, don't you remember it?" said Coe.

"I ought to—I broke the carving knife in trying to cut it, sir."

"Are there any more aboard?"

"About two dozen, we took 'em from a droger."

"Will they go into the 18 pounders?"

"By thunder, Commodore, but that's the idea. I'll try them," cried the first luff.

And in a few minutes the fire of the old "Santa Maria," (Coe's ship,) which had ceased entirely, was re-opened, and Admiral Brown found more shot flying over his head. Directly one of them struck his mainmast, and as it did so, shattered and flew in every direction.

"What is that which the enemy is firing?" asked Brown—but nobody could tell.

Directly another one came in through a port and killed two men who stood near him; then striking the opposite bulwarks, burst into flinters.

"By Jove, this is too much; this is some new-fangled paixhan or other—I don't like 'em at all!" cried Brown; and then as four or five more of them came slap through his sails, he gave the order to fill away and actually backed out of the fight, receiving a parting broad-side of Dutch cheese.

This is an actual fact; our informant was the first lieutenant of Coe's ship—*Monitor.*

WOOL.—The history of the growth of wool is very curious. Fifty years ago not a pound of fine wool was raised in the United States, in Great Britain, or any other country except Spain. In the latter the flocks were owned exclusively by the nobility or the crown. In 1764, a small flock was sent to the Elector of Saxony, as a present from the King of Spain, whence the entire product of Saxon wool, now of such immense value. Before the breaking out of the last war between this country and Great Britain, Colonel Humphreys succeeded in getting a few marino sheep brought out of Spain; then their exportation was prohibited under penalty of being sent to the galleys for life.

In 1809, during the second invasion of Spain by the French, some of the valuable crown flocks were sold to raise money. Our Consul at Lisbon, Mr. Jarvis, purchased fourteen hundred head, and sent them to this country. Previously, however, Mr. Livingston obtained a few sheep of the Spanish breed, as a present, in 1792. A portion of the pure unmixed merino blood of these flocks is to be found in Vermont at this time. Such was the origin of the immense flocks of fine-wooled sheep in the United States and Great Britain.—*Ex.*

Grasses.—In Great Britain there are forty-seven kinds of grasses cultivated. Among these there are some naturally adapted to every variety of soil, and every modification of climate the country presents. In this country, where there is so great a diversity in these respects, the introduction of new and more suitable varieties is much to be desired. In this important department of the farming art, our improvements have thus far been limited, and by no means so markedly distinguished as we could wish. In other things we have effected wonders; in this, literally speaking, the work has hardly yet commenced. In the old countries pastures are "stocked" with several kinds of grasses in order that the various animals may all be supplied with the kind of feed which experience has demonstrated to be best adapted to their taste. It is seldom the case that lands intended for pasturage, are "laid down" with one or two kinds, as with us, especially when the animals intended to be depastured are of different kinds. By sowing a variety, more than three times the amount of feed is obtained, and that of a far better quality, it is said, than where the soil is occupied only by one. This subject we regard as of sufficient importance to elicit the candid attention of our farmers and herdsmen generally.—*Maine Farmer.*

Improved Ox Yoke.— The Massachusetts Plowman thus describes the first *improved* ox yoke heard of during the last hundred years. It is in use in Seabrook and found to be of great advantage to the farmer:

The bows go through a slide which is fitted to a mortice in the yoke which is made three or four inches longer than the slide, making it changeable, or 8 inches, which makes the difference between a long and a short yoke. The mortice is made an inch wider at the bottom than the top, with a groove in the centre, half an inch each side for the slide to rest upon, an iron bolt at each end of the mortice and one in the centre, which goes through a mortice in the slide and preserves the requisite strength. The slide is regulated by an iron hasp attached to it and enters holes in the yoke half an inch apart, which makes it easily fitted to any yoke of cattle from a long to a short, and to give the advantage to either ox from half an inch to 6 or 8.

Test of Pure Tea.—Make your tea as usual, then pour off the first, filling up with water, and instead of replenishing the tea-pot for a second cup, turn out the leaves on a plate. If they are real tea, they will retain their usual color, but if they are sloe or ash, or any other such production, the false coloring matter will have been carried off in the water, the leaves will remain quite black. In our present cheap tea days, it becomes necessary for our good housewives to look sharp into cause and effect.—*N. Y. Mechanic.*

How to Fry Fish.—Put the fish into the fat while the fat is boiling hot; and there should always be fat enough for the fish to float. If the fish is put into cool fat, or what is not boiling hot, it absorbs all the fat and is not fit to eat. If the fish is put in shallow fat it falls to the bottom of the pan and burns, adhering so close that it cannot be taken out without breaking in pieces. Fried fish should be cooked quick.

Fat Animals and Large Crops Result alike from Abundance of Proper Food.—The profits of crops, as well as cattle, depend mainly upon the return they make for the food and labor bestowed upon them. The man who grows a hundred bushels of corn, or makes a hundred pounds of meat, with the same means and labor his neighbor expends to obtain fifty bushels or fifty pounds, has a manifest advantage; and while the latter merely lives, the former, if prudent, must grow rich. He gains the entire value of the extra fifty bushels or fifty pounds. This disparity in the profits of agricultural labor and expenditure is not a visionary speculation—it is a matter of fact, which is seen verified in almost every town. We see one farmer raise 80 bushels of corn on an acre of land, with the same labor, but with more foresight in keeping his land in good tilth and feeding better his crop than his neighbor employs upon an acre, and who does not get 40 or even 30 bushels. This difference results from the manner of feeding and tending the crop.—*Vt. Chronicle.*

Killing Sheep.—Elijah M. Davis, White Plains, N. Y., says if bells are put on one or two sheep in a flock, it will prevent dogs killing them. "Before I put bells on my sheep," says he, "I was considerably troubled with dogs; but since I belled them I have not been troubled at all, while some of my neighbors who did not use the same precaution, have suffered more or less. A sheep-killing dog is a sneaking creature, and when they start up the sheep, bells make a noise and the dogs sneak off. If the sheep are within a half mile of the farmer's house the bells will give the alarm."

The Ash.—The white ash is not only a most beautiful tree, but highly valuable for timber. It is used mechanically for a great variety of purposes, and in many situations is even more durable than oak. For carriage building it is not surpassed by any wood, particularly for felloes, shafts, and springs, and being possessed of great elasticity and strength it lasts a long time, perfectly sound and unimpaired. There are few of our deciduous trees more easily propagated, and were it not for the attacks of the borer, which, in this climate, often proves fatal to it—but which, by the way, may be easily prevented, its cultivation would prove a source of no small profit, as it is annually becoming more scarce and more difficult to be obtained.—*Maine Farmer.*

To Measure Hay in the Mow or Stack.— More than twenty years since, I copied the following method of measuring hay from some publication, and, having verified its general accuracy, I have both bought and sold hay by it, and believe it may be useful to many farmers, where the means of weighing are not at hand.

Multiply the length, breadth, and height into each other, and if the hay is somewhat settled, ten solid yards will make a ton. Clover will take from 11 to 12 yards for a ton.

Albany Cult.

Potatoe Disease.—The most learned, thorough, and patient observations of the most eminent observers, are summed up in Silliman's Journal, showing conclusively that this malady is not caused by an insect or fungus; and the only satisfactory result arrived at is this:—That no nation should place its dependence solely on a *single crop*. If there is only one leg to the stool, and that is knocked out, the sitter thereon is at once placed in imminent jeopardy.

Albany Cultivator.

Oxen Drawing Apart, may be prevented by connecting the horn of one ox to the horn of the other, by means of a strong cord, tied at the tips of each horn. Balls on the horns render this easy. So says F. Wingate, in the Maine Farmer.

Head Cheese.—*To serve up in slices, on the tea-table.*—Take a hog's head, ears, and feet, and boil them till you can pick all the bones out, then season it with salt, pepper, and a little sage, or summer savory; put it in a round dish or cheese-hoop, in a cool place, and press it; when cool, it is ready for use.—*Economical Housekeeper.*

Good Black Ink.—1 lb. nut-galls; 3 oz. of gum arabic; 3 oz. of copperas. Soak the nut-galls in three pints of rain-water; the gum arabic in half a pint of warm rain-water; the copperas in another half pint; let them stand separately 48 hours, and then mix them, and the ink is made. This is the recipe of Prof. Webster, of Harvard University.

Means of Preventing Acidity in Bread.—Bread made in warm weather is frequently sour, and is thus not only disagreeable, but unwholesome. We are assured by a correspondent that a little carbonate of magnesia, in the proportion of three grains to a pound of flour, entirely obviates the risk of this accident.